

**I Claim:**

1. **Lighted reading glasses that provide enhanced viewing of text of a predetermined conventional size in a predetermined distance range from the glasses in poorly lit areas, the lighted reading glasses comprising:**

5                   **a pair of lenses having outer portions and inner portions that are adjacent to and laterally spaced from each other and providing a predetermined field of view for a user;**

**light transmissive material of the lenses having a predetermined configuration for refracting light to provide the user with vision correction of a predetermined character to allow the predetermined size of text disposed in the predetermined distance range within the field of view to be substantially clearly read;**

10                   **a pair of lights associated with the lenses each having a predetermined high light strength rating and a predetermined lighted area in which light emanating therefrom is projected; and**

15                   **a pair of light mounts adjacent the outer portions of the lenses that cooperate with the lights to fix the predetermined lighted areas relative to the lenses to be oriented for overlap to provide an overlapping lighted area that is maximized in size in the predetermined distance range.**

20                   **2. The lighted reading glasses of claim 1 wherein the light mounts are housings that include support surfaces having a predetermined configuration for supporting the lights to direct the predetermined lighted areas emanating therefrom inwardly toward each other.**

25                   **3. The lighted reading glasses of claim 1 wherein the predetermined lighted areas each have a conical shape with the conical areas intersecting at a predetermined distance within the predetermined distance range so that the overlapping lighted area increases in size with increasing distance from the lenses to minimize effects of light dissipation in**  
30                   **the predetermined distance range.**

4. The lighted reading glasses of claim 1 wherein the lights are high intensity light-emitting diodes of a predetermined material so that the predetermined lighted area is generated by a narrow light beam.

5 5. The lighted reading glasses of claim 1 wherein the predetermined lighted areas are narrow cones so that there is an unlighted area proximate to the lenses which does not substantially fall within the predetermined distance range.

10 6. The lighted reading glasses of claim 1 wherein the light mounts are housings, the lights are light emitting diodes of a predetermined material, and

15 at least one small disc-shaped battery power supply for the light-emitting diodes to allow the housings to be compactly sized with each of the light-emitting diodes and the battery power supply therefor self-contained in respective ones of the housings.

7. The lighted reading glasses of claim 1 wherein the light mounts are housings, and

20 a small power source in the housings for each of the lights to allow the housings to be compactly-sized, self-contained lighting modules for the glasses.

25 8. The lighted reading glasses of claim 7 including a frame, and the lighting modules are one of removably carried on the frame and fixed to the frame.

9. The lighted reading glasses of claim 8 wherein the removably carried modules include resilient clips for being removably attached to the frame.

5 10. The lighted reading glasses of claim 8 wherein the removably carried light modules are fixed onto an adjustable light-carrying frame configured for being releasably secured to the frame of the reading glasses.

10 11. The lighted reading glasses of claim 8 wherein the frames include lens portions that extend about the light transmissive material of the lenses and an interconnecting bridge portion that extends between the frame lens portions.

15 12. The lighted reading glasses of claim 1 including elongate temple arms having forward and rearward ends with the arms extending rearwardly from adjacent the outer portions of the lenses with the light mounts being fixed to the temple arms adjacent the forward ends thereof.

20 13. The lighted reading glasses of claim 12 wherein the light mounts include blinder extensions that project between the lights and the lenses to minimize refraction or reflection of light emanating from the lights through the lenses.

25 14. The lighted reading glasses of claim 1 wherein the lenses have a convex configuration with a predetermined diopter rating to magnify the text to be read.

30 15. The lighted reading glasses of claim 1 wherein the predetermined high light strength rating of the lights is approximately 2300 milli candles (mcd) to generate high brightness light so that light dissipation is minimized at distances in the predetermined reading distance range

where the overlapping lighted area is absent.

16. The lighted reading glasses of claim 1 wherein the predetermined lighted areas are cones of light increasing in size further from the glasses so that the overlapping lighted area has a conical shape leaving only peripheral areas in the field of view of the lenses that are lit by a single one of the lights with the peripheral areas becoming progressively smaller as distances from the lenses increase.

17. A compactly sized, self-contained lighting module comprising:  
a small solid-state light source of a predetermined material for generating a high intensity light beam therewith;  
a power source having a small, thin configuration for providing electrical power to the light source;  
a switch that selectively electrically connects the power source to the light source and includes an actuator portion for being shifted by a user to generate the high intensity light from the light source; and  
a housing having a predetermined compact configuration that contains the light source and the power source, and has an opening through which the switch actuator portion extends.

18. The lighting module of claim 17 wherein the predetermined compact configuration of the housing includes a length of less than approximately one and one-half inches, a width of less than approximately one-inch, and a depth of less than approximately one-half an inch.

19. The lighting module of claim 17 wherein the power source comprises at least one small, thin disc-shaped battery having a predetermined small diameter and a predetermined thickness several times smaller than the diameter, and the housing predetermined compact configuration includes a maximum width slightly larger than the disc

battery diameter, and

ends of the housing spaced from each other along a lengthwise dimension of the housing with the housing configured along the lengthwise dimension to decrease in width from the housing maximum width toward both ends of the housing.

20. The lighting module of claim 19 wherein the at least one disc-shaped battery comprises two identical disc-shaped batteries, and the housing predetermined compact configuration includes a depth slightly larger than twice the thickness of one of the batteries to allow two stacked batteries to be disposed in the housing.

21. The lighting module of claim 20 wherein the predetermined small diameter of the battery is less than approximately one-inch to allow the maximum width of the housing to be less than approximately one-inch and the depth of the housing to be less than approximately one-half an inch.

22. The lighting module of claim 17 wherein the switch comprises a slide switch with the user pushing or pulling on the switch actuator portion for sliding thereof.

23. The lighting module of claim 17 wherein the light beam has a predetermined narrow conical shape with an axis extending from the light source centrally within the conical beam, and the housing having a longitudinal axis and mounting surfaces for the light source arranged to direct the light beam so that the central axis of the beam is canted from the housing axis.

24. The lighting module of claim 17 including means for attaching the module to glasses.

5 25. A clip-on light apparatus for being removably secured to eyeglasses having a pair of lenses, the clip-on light apparatus comprising:  
a pair of lights;  
an elongate spacer frame assembly having opposite end portions that carry the lights; and  
10 retainers at the end portions that are configured to grip the eyeglass lenses with the lights adjacent thereto to emanate light forwardly for providing illuminated viewing with the eyeglasses.

15 26. The clip-on light apparatus of claim 25 wherein the elongate spacer frame assembly includes an adjustable length to allow the end portions and lights carried therewith to be shifted toward and away from each other for different sizes of eyeglasses.

20 27. The clip-on light apparatus of claim 25 wherein the lights each comprise a light module having a compact housing and a small, high-power light-emitting diode positioned at a predetermined orientation by the housing.

25 28. The clip-on light apparatus of claim 27 where in the lights modules further include a small disc-shaped power source mounted in the housing, and a light switch for energizing the light via the power source for lighting a predetermined area forwardly of the eyeglass lenses.

30 29. The clip-on light apparatus of claim 25 wherein the retainers include at least one small, generally U-shaped member at either end portion for engaging the adjacent eyeglass lens to resist fore and aft shifting of the lights relative to the lenses.

30. The clip-on light apparatus of claim 29 wherein the retainers include arms to which the U-shaped members are mounted with the arms being malleable to allow the members to be repositioned for different configurations of lenses.

31. The clip-on light apparatus of claim 29 wherein the at least one U-shaped member includes a pair of spaced U-shaped members at either end portion to fit along the adjacent lens above and below each other.

32. The clip-on light apparatus of claim 25 wherein the elongate spacer frame assembly comprises elongate rods that are spring loaded to draw the end portions toward each other so that the retainers grip onto the eyeglass lenses.

33. The clip-on light apparatus of claim 25 in combination with the eyeglasses including a pair of temple arms extending rearward from outer sides of the lenses.

34. An adjustable clip-on light apparatus comprising:  
a clip-on frame for being removably secured to eyeglasses;  
light modules carried by the frame and including small lights arranged in the modules to project light in a predetermined area forwardly of the eyeglasses when the frame is secured thereto; and  
a light module spacer frame including end portions to which the light modules are mounted and a draw spring assembly that biases the end portions toward each other to allow the frame to adjust for being removably secured to different sizes of eyeglasses.

35. The adjustable clip-on light apparatus of claim 34 wherein the spacer end portions include retainers configured to be tightly engaged against lenses of the eyeglasses.

36. The adjustable clip-in light apparatus of claim 34 wherein the draw spring assembly includes a coil spring having an extended state with the spacer end portions at a closest position relative to each other and a compressed state with the spacer end portions at a furthest position relative to each other.

37. The adjustable clip-on light apparatus of claim 36 wherein the draw spring assembly includes rods that shift relative to each other for adjusting the frame and having a stop that defines a predetermined limit of rod shifting at the closest position of the end portions.

38. The adjustable clip-on light apparatus of claim 34 wherein the small lights comprise high intensity light emitting diodes that project exteriorly from the light modules, and blinder extensions of the light modules that are disposed between the light-emitting diodes and adjacent lenses of the eyeglasses with the frame secured thereto.

39. The adjustable clip-on light apparatus of claim 34 wherein the light modules comprise a housing having mounting surfaces configured to orient the lights so that light emanating therefrom has an inward cant to form a double-lit area at a predetermined normal reading distance from the eyeglasses.

40. The adjustable clip-on light apparatus of claim 39 wherein the housings have a longitudinal axis and the mounting surfaces are inclined relative to the axis to project light inwardly toward each other .

41. A lighted eyeglass apparatus, the combination comprising:  
eyeglasses including lenses and a pair of temple arms that  
extend rearwardly from the lenses;  
a clip-on frame for being removable secured to the eyeglass



lenses; and

lights carried by the clip-on frame for projecting light forwardly from the lenses with the clip-on frame secured thereto.

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42. The combination of claim 41 wherein the clip-on frame includes end retainers, the retainers gripping the lenses to position the lights adjacent to the temple arms with the clip-on frame secured to the eyeglass lenses.

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43. The combination of claim 41 wherein the eyeglass lenses include outer frame portions spaced at a predetermined distance, and the clip-on frame includes an adjustable spacer assembly having end portions to which the lights are mounted with the lights being positioned adjacent the outer frame portions by adjacent of the spacer assembly so that the end portions are spaced by approximately the same as or slightly greater distance than the predetermined distance between the lens outer frame portions.

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44. The combination of claim 43 wherein the end portions include flange arms having U-shaped retainer members that fit about front and rear sides of the lenses to resist fore and aft shifting of the clip-on frame as secured to the eyeglasses.

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45. The combination of claim 41 wherein the clip-on frame includes opposite ends at which the lights are fixed, and a clipping mechanism therebetween for clipping the frame to the eyeglasses in an area generally between the lenses.

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46. A clip-on light apparatus comprising:  
an elongate frame;  
opposite ends of the frame;

a light mounted to each of the frame ends; and  
a clipping mechanism intermediate the frame ends for  
releasably securing the frame to eyeglasses.